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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
JERABEK, KELLY L	

ART UNIT	PAPER NUMBER
2622	

DATE MAILED: 10/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/067,463	ORBOUBADIAN, VAHID	
	Examiner	Art Unit	
	Kelly L. Jerabek	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 July 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16 and 26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16 and 26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 February 2002* is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1-16 and 26 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-8, 10-16 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narayanaswami et al. in view of Inoue et al. US 6,273,535.

Re claim 1, Narayanaswami discloses a method of embedding camera information and image capture related information in a digital form of an image, comprising: receiving information on camera characteristics suitable to enhance image reproduction (parameters such as camera location, image mode, etc.) (page 4,

paragraph 43); receiving camera setting information (focal length, focus distance, frame number, image quality, flash status, light meter readings, etc.) related to a first captured digitized image (page 3, paragraphs 34-35); generating an encryption key based at least in part on the camera characteristics (page 5, paragraph 46); embedding a watermark in said first captured digitized image, wherein the watermark contains at least a portion of the information on the camera characteristics and at least a portion of the camera setting information related to said first captured digitized image; and encrypting the watermark using the encryption key (page 4, paragraph 42 - page 5, paragraph 48). However, although the Narayanaswami reference discloses all of the above limitations it fails to specifically state that any of the camera characteristics capable of being watermarked are static camera characteristics suitable to enhance image reproduction.

Inoue discloses a digital camera capable of storing additional image information together with sensed image information. Inoue states that in order to print an image a printer (2) requests the digital camera (1) to transfer image information and image additional information (11) corresponding to that image. Inoue further states that a processing selector (12) selects appropriate print processing based on the obtained image additional information (11) (figs. 1-2; col. 4, lines 35-65). In addition, Inoue states that the image additional information (11) used for image processing (used to enhance image reproduction) may include digital input device unique information such as camera type information (13-16) (static camera characteristics). Therefore, it would have been obvious for one skilled in the art to have been motivated to include image additional

information such as camera type information as disclosed by Inoue as one of the camera characteristics capable of being watermarked as disclosed by Narayanaswami. Doing so would provide a means for attaching information regarding static camera characteristics in order to perform the most suitable printing control processing (Inoue: col. 4, lines 61-65).

Re claims 2-4, Narayanaswami discloses all of the limitations of claim 1 above. Additionally, Narayanaswami states that a first static camera characteristic (image sensor shape) (camera capable of being in portrait or landscape mode indicates that the image sensor of the camera is rectangular in shape) as well as many other parameters may be embedded as a watermark in a digital image (page 3, paragraph 35; page 4, paragraph 43). However, Narayanaswami does not specifically state that camera parameters such as camera image sensor bad pixel characteristics, sensor current values, and image sensor sensitivities are embedded as a watermark in a digital image. The Examiner takes **Official Notice** that camera parameters such as camera image sensor bad pixel characteristics, sensor current values, and image sensor sensitivities were well known in the art at the time the invention was made. Therefore, it would have been obvious for one skilled in the art to have been motivated to record and watermark camera parameters such as camera image sensor bad pixel characteristics, sensor current values, and image sensor sensitivities into a digital image in addition to the parameters disclosed by Narayanaswami that are watermarked into a digital image.

Doing so would provide a means for accessing the camera parameters present when the image was taken when accessing the image itself.

Re claim 5, Narayanaswami states that the camera setting information includes information related to the flash intensity used to capture the digitized image (page 3, paragraph 34).

Re claim 6, Narayanaswami states that information related to the ambient light present when the image was captured is included in the watermark (page 3, paragraph 34).

Re claim 7, Narayanaswami states that a number of dynamically measured camera characteristics are included in the watermark (page 3, paragraph 34).

Re claim 8, Narayanaswami discloses a digital camera system, comprising: an imager (page 3, paragraph 32); camera characteristics suitable to enhance image reproduction (parameters such as camera location, image mode, etc.) (page 4, paragraph 43); a first variable camera setting; (focal length, focus distance, frame number, image quality, flash status, light meter readings, etc.) (page 3, paragraphs 34-35); a watermark generator used to embed in the form of a watermark at least one of said camera characteristics and said first variable camera setting information in an image captured by the camera; and a key generator configured to generate an

encryption key used to encrypt a watermark (page 4, paragraph 42 - page 5, paragraph 48). However, although the Narayanaswami reference discloses all of the above limitations it fails to specifically state that any of the camera characteristics capable of being watermarked are static camera characteristics suitable to enhance image reproduction.

Inoue discloses a digital camera capable of storing additional image information together with sensed image information. Inoue states that in order to print an image a printer (2) requests the digital camera (1) to transfer image information and image additional information (11) corresponding to that image. Inoue further states that a processing selector (12) selects appropriate print processing based on the obtained image additional information (11) (figs. 1-2; col. 4, lines 35-65). In addition, Inoue states that the image additional information (11) used for image processing (used to enhance image reproduction) may include digital input device unique information such as camera type information (13-16) (static camera characteristics). Therefore, it would have been obvious for one skilled in the art to have been motivated to include image additional information such as camera type information as disclosed by Inoue as one of the camera characteristics capable of being watermarked as disclosed by Narayanaswami. Doing so would provide a means for attaching information regarding static camera characteristics in order to perform the most suitable printing control processing (Inoue: col. 4, lines 61-65).

Re claim 10, the watermark disclosed by Narayanaswami is visually imperceptible (page 5, paragraph 45).

Re claims 11-13, Narayanaswami states that the variable camera settings to be watermarked consist of shutter speed, aperture setting, flash setting as well as other camera settings (page 4, paragraph 43).

Re claims 14-16, Narayanaswami discloses all of the limitations of claim 8 above. Additionally, Narayanaswami states that a first static camera characteristic (image sensor shape) (camera capable of being in portrait or landscape mode indicates that the image sensor of the camera is rectangular in shape) as well as many other parameters may be embedded as a watermark in a digital image (page 3, paragraph 35; page 4, paragraph 43). However, Narayanaswami does not specifically state that camera parameters such as imager current, defective pixels associate with the imager, and gamma information are embedded as a watermark in a digital image. The Examiner takes **Official Notice** that camera parameters such as imager current, defective pixels associate with the imager, and gamma information were well known in the art at the time the invention was made. Therefore, it would have been obvious for one skilled in the art to have been motivated to record and watermark camera parameters such as imager current, defective pixels associate with the imager, and gamma information into a digital image in addition to the parameters disclosed by Narayanaswami that are watermarked into a digital image. Doing so would provide a means for accessing the

camera parameters present when the image was taken when accessing the image itself.

Re claim 26, see claim 1. Narayanaswami also states that the digitized image and the data set may be transmitted (page 4, paragraph 41).

Claim 9 rejected under 35 U.S.C. 103(a) as being unpatentable over Narayanaswami et al. in view of Inoue and further in view of Isnardi et al. US 6,037,984.

Re claim 9, the combination of the Narayanaswami and Inoue references discloses all of the limitations of claim 8 above. However, Narayanaswami states that the stamping/watermarking information is invisible.

Isnardi states that digital watermarks are well known in the art. Isnardi states that although watermarks are generally invisible, in some application, it is desirable to produce a visible watermark that can be removed by an authorized image decoder (col. 1, lines 11-25). Therefore, it would have been obvious for one skilled in the art to have been motivated to include a visually perceptible watermark as disclosed by Isnardi in the camera capable of watermarking camera parameters into digital image data as disclosed by Narayanaswami. Doing so would provide a means for visibly displaying a watermark on an image and only allowing it to be removed by an authorized image decoder (Isnardi: col. 1, lines 21-25).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contacts

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kelly L. Jerabek whose telephone number is **(571) 272-7312**. The examiner can normally be reached on Monday - Friday (8:00 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on **(571) 272-7304**. The fax phone number

for submitting all Official communications is (703) 872-9306. The fax phone number for submitting informal communications such as drafts, proposed amendments, etc., may be faxed directly to the Examiner at (571) 273-7312.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KLJ

DAVID OMETZ
SUPERVISORY PATENT EXAMINER